

In the Claims

1. – 26. (Cancelled)

27. (Currently amended) A method of producing a construct comprising a recombinant virus-like particle ~~that infects a host organism for expression of the VLP~~ and a first and second exogenous protein for expression in the host organism and the exogenous proteins target specific tissue in a target animal, the method comprising:

- (a) providing a viral genome that infects the host organism wherein the host organism is yeast, bacteria, algae, fish or crustacean ~~or an animal~~;
- (b) isolating at least one viral coat protein sequence from the viral genome that encodes for a capsid structure;
- (c) inserting at least one first exogenous sequence encoding a protein or peptide of interest into the coat protein sequences, wherein the protein or peptide is antigenic or allergenic in the target animal;
- (d) inserting at least one second exogenous sequence encoding a tissue-targeting protein sequence in the animal into the coat protein sequences, wherein the expressed targeting protein has affinity for a receptor on tissue in the target animal;
- (e) cloning the viral coat protein sequences comprising the first and second exogenous sequences into an appropriate vector for infection of the host organism; and
- (f) transforming the host organism for expression of the recombinant virus-like particle and exogenous peptides or proteins therein, wherein the host organism and target animal are not the same.

28. – 29. (Cancelled)

30. (Previously presented) The method of claim 27, wherein more than one first exogenous sequence is inserted.

31. (Previously presented) The method of claim 27, wherein one or more of the second exogenous sequences has the function of targeting the expressed recombinant virus-like particle to a specific location.

32. (Original) The method of claim 27, wherein more than one viral coat protein is isolated.

33. (Cancelled)

34. (Currently amended) A genetic construct for expression in a host organism with subsequent administration of the host organism with expressed proteins to a target animal, the construct comprising at least one nucleotide sequence encoding at least one viral coat protein for expression in from a virus that infects the [[a]] host organism wherein the host organism is selected from the group consisting of yeast, bacteria, algae, fish or crustacean and a first and second exogenous sequence, wherein the first exogenous sequence encodes for an antigenic or allergenic protein effective in the target animal and the second exogenous sequence encodes for a tissue-targeting protein, wherein both the antigenic or allergenic protein and tissue-targeting protein, when expressed in the host organism, are positioned on the expressed viral coat protein, wherein the expressed tissue-targeting protein has the function of targeting the expressed antigenic or allergenic protein to a specific location on tissue in the target animal after the host organism with the expressed proteins is administered to the target animal and for expression in the host organism, at least one first exogenous sequence encoding for an antigenic or allergenic protein effective in a target animal, wherein the antigenic or allergenic protein is for displaying on the expressed viral coat protein and at least one second exogenous sequence encoding a tissue targeting protein having affinity for tissue in the target animal and for displaying on the expressed viral coat protein, wherein the expressed tissue targeting protein has the function of targeting the expressed genetic construct to a specific location on tissue in the target animal and wherein the host organism and target animal are not the same.

35. (Original) The construct of claim 34, wherein more than one viral coat protein has been modified to display foreign proteins or peptides.

36. (Cancelled)

37. (Original) The construct of claim 34, wherein the exogenous sequence is inserted into a region truncated to remove sequence unnecessary for virus-like particle self-assembly.

38. -41 (Cancelled)

42. (Withdrawn and currently amended) [[The]] A method of delivery of the expressed proteins of claim [[41]] 34, further comprising: (a) infecting an organism with the recombinant virus-like

~~particle of claim 40; and (b) orally feeding wherein the host organism and whole biomass of cultured host organism is orally fed the infected organism~~ to human or non-human animals.

43. (Withdrawn and currently amended) The method of claim 42, wherein the biomass is processed for uniform dosing.

44. (Withdrawn and currently amended) The method of claims ~~42-43~~ 41-43, wherein the biomass is freeze dried.

45. (Withdrawn and currently amended) The method of claims ~~42-43~~ 41-43, wherein the biomass is encapsulated.

46. (Withdrawn and currently amended) The method of claims ~~42-45~~ 41-46, wherein the vaccine is used as a treatment for allergy.

47. (Withdrawn and currently amended) The method of claim 27 [[41]], wherein ~~the expressed construct vaccine~~ is administered to the target animal by injection.

48. (Cancelled)